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AUTHOR Dulaney, Chuck; Baenen, Nancy; Banks, Karen; Yaman, Kimberly; Burch, Glenda

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ABSTRACT

This report describes achievement gaps found in the Wake County Public School System (WCPSS), North Carolina, compares the status of the WCPSS to achievement in the past, and compares WCPSS to other similar school systems and national data when available. On almost all academic measures, white females were the most successful students in the WCPSS, and black males were the least successful group. The gap between the achievement of white and black students has decreased over time in some areas, but not in others. Hispanic and Black students in the WCPSS are more likely to come from low-income homes than are other students, and Black students are over-represented in special education programs. Overall, 52.6% of black students scored at or above grade levels in reading and mathematics on the North Carolina End-of-Grade tests (EOG), compared with 90% of white students. Both groups did show improved performance compared to 1995, but the performance gap narrowed only slightly and only at some grade levels. Low income students of all races showed the lowest performance overall on the EOG. The dropout rate for all races has decreased since 1994-1995, and the gap has closed somewhat between white and black students. Hispanic and Black students were less likely to pass the North Carolina Competency Test, required for graduation, and they were less likely to participate in advanced placement courses than were white students. The racial gap in Scholastic Assessment Test scores for WCPSS and North Carolina students has increased slightly over the past 5 years. Average scores for black students have remained relatively stable, but average scores for white students have been rising steadily. Accomplishing the goals of reducing the achievement gap in the WCPSS will require nearly eliminating the socioeconomic and demographic gaps described in this report. (Contains 21 tables, 29 figures, and 19 references.) (SLD)

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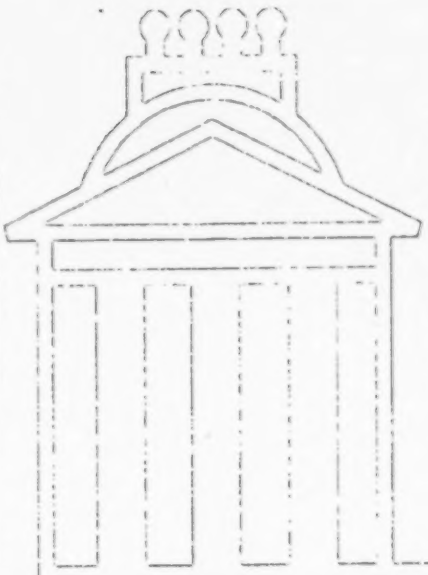

GAPS IN ACADEMIC ACHIEVEMENT:

WCPSS STATUS 2000-01

TM033167

Department of Evaluation and Research

Report No. 01.24
March 2001

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WAKE COUNTY PUBLIC SCHOOL SYSTEM

GAPS IN ACADEMIC ACHIEVEMENT: WCPSS STATUS 2000-2001

REPORT SUMMARY

BACKGROUND

Gaps in the academic success of groups of students who differ in terms of their economic status, race, and gender have been found at the national, state, and local level. In this report, we explore the size of the gaps found in WCPSS at the present time, compare present status in WCPSS to the past, and compare WCPSS to other similar school systems and in the context of national data when it was readily available.

MAJOR FINDINGS

On almost all academic measures reviewed for this report, White females in WCPSS were the most successful group, and Black males were the least successful group. The gap between White and Black students' achievement has decreased over time in some areas but has not in others. Results in this report indicate that:

- Hispanic and Black students in WCPSS are more likely to come from low-income homes than are other students.

- Black students in WCPSS and nationally are over-represented in special education programs for students with learning or behavioral/emotional disabilities.

- Overall, 52.6% of Black students scored at or above grade level (Levels III and IV) in both reading and math on the spring 2000 End-of-Grade (EOG) tests, compared to 90% of White students. Both groups showed improved performance compared to 1995. The performance gap narrowed, but only slightly and only at some grade levels.

- Low-income students of all races showed the lowest performance overall on the EOG, with only 48.6% showing at or above grade level performance in both reading and math. Adequate EOG achievement growth for low income students appears to be the greatest challenge as the school district works toward Goal 2003, which calls for 95% of tested students to demonstrate skills at or above grade level.

- Black high school students were more than twice as likely to fail one or more courses as White students (48% versus 21%) during the 1999-2000 school year. Among Hispanic students, 38% failed one or more classes. Failure rates improved slightly for *all* groups since 1993-94, with the most improvement for Black males.

- The dropout rate for students from all racial groups has decreased since 1994-95, and the gap *has* closed somewhat between the rates for White students and Black students. While dropout rates for White students fell from 2.8% to 2.0% in five years, rates for Black students fell from 7.1% to 4.4%.

- Graduation requirements include passing both English I and Algebra I courses and in these courses students must take an End-of-Course (EOC) test. These courses are also gateways to higher level courses, with test scores at Levels III and IV indicating adequate preparation for the courses. Compared to white students, substantially lower percentages of Black students, and somewhat lower percentages of Hispanic students, scored at Level III or IV on the EOC tests in those two courses. However, the gap is closing somewhat, with minority students showing greater increases over time than other groups in the percent of students scoring at Levels III or IV.

- Passing the North Carolina Competency Test is also a graduation requirement. Hispanic students had the lowest passing rates in eighth grade (41% on both reading and math) in 1999-2000. Among Black students, 68% passed, while the highest passing rate was for White students (93%).

- Participation in Advanced Placement (AP) courses is one measure of high academic performance at the high school level. Black students are less likely to participate in AP courses than are students of other racial groups in WCPSS, and are also less likely to achieve high scores on AP exams (therefore earning college credit).

- The racial gap in SAT scores for WCPSS and North Carolina students has increased slightly in the past five years. While average SAT scores for Black students have remained relatively stable, average scores for White students have been steadily rising.

Within WCPSS, many students within each subgroup excel. However, smaller proportions of low income and minority students show on-grade-level performance than higher income and White students. Gaps in achievement by income, race, or gender are due to myriad factors, including correlations with personal, school, family, societal, and other factors. Gaps <u>*can*</u> be closed with appropriate resources, but it is not easy. Accomplishment of the 95% goal will require nearly eliminating the socioeconomic and demographic gaps described in this report.

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INTRODUCTION

The Wake County Public School System (WCPSS) is striving to meet a challenging achievement goal, that 95% of students will score at or above grade level on state tests of reading and math by 2003, benchmarked at grades 3 and 8. As a system, we also want optimal academic success for all of our students at all grades. *To attain these levels of excellence, all students must show strong achievement, with no large gaps in the performance of subgroups.* In this report, we examine students' academic success in WCPSS based on various outcomes (such as achievement test scores, dropout rates, grades, and course enrollments). When available, we also compare the present performance of WCPSS with past performance, or WCPSS performance with that of comparable school systems or national data. Finally, we will share some of the probable reasons that achievement gaps exist.

Gaps have been evident in the achievement of students with different backgrounds and characteristics for decades. Results on the National Assessment of Educational Progress (NAEP) have found significant differences in the achievement of poor students versus other students (Anderson, Hollinger, and Conaty, 1992; Williams, 1996) and in the achievement of Black and Hispanic students versus White students (Williams, 1996). Differences in the achievement of Black and White students have been broadly reported upon kindergarten entry and throughout students' K-12 experience (Jencks and Phillips, 1998). The results for different races and income levels are related, in that Black students are more likely to be low income than are White students. However, it must be remembered that *students of all racial backgrounds can be found at all levels of achievement.*

Closing the achievement gaps becomes more challenging in the face of rising expectations for success for *all* students. Although it is difficult to close the achievement gaps, it can be done. Progress has been reported in the past 20 years, with Black and Hispanic student achievement rising while White student achievement remained stable (Williams, 1996). Substantial improvement has been seen in writing performance since written compositions have become major components of state assessments (Baker and Linn, 2000). The Effective Schools movement identified schools that had no gaps or only very small gaps in the academic achievement of minority and majority students. Some school districts, such as that of Brazosport, Texas, have also been successful in closing achievement gaps through use of "quality tools" and extremely prescriptive instructional methods. Common elements in these success stories are strong regular instructional programs along with extra support from the school and community. The purpose of this report is not to explore ways to close the gap but to share information and sources for additional information on this topic.

In North Carolina, all racial groups have increased in the percent of students at or above grade level since 1993-94, although performance still varies widely across groups. The size of the gains has led to a slight closing of the gap in the achievement of Black and White students. The greatest gains in the past six years were made by Native American students, while Hispanic and Asian students saw their percentage of students at or above grade level rise less than the statewide average.

Gains in the Percentage of Students Considered At or Above Grade Level on End-of-Grade Tests in Both Reading and Math Between 1994 and 2000

Group	NC Gain	WCPSS Gain
Native American	23.0	14.9
Black	17.4	16.4
ALL STUDENTS	**14.3**	**11.0**
White	13.9	10.2
Hispanic	9.3	6.7
Asian	7.7	5.7

Note: The percentages used in calculating gains were based upon all students who were tested in both Reading and Mathematics.

As shown above, in WCPSS the gaps in EOG achievement by subgroup also showed improvement for Black and Native American students, although the gains were smaller in our district than were found statewide. The Evaluation and Research Office (E&R) issued reports in 1994 and 1995 specifically focusing on these gaps (Dulaney and Banks, 1994; Dulaney and Bethune, 1995), and continues to report results for large subgroups in many of its reports. The gaps in WCPSS, as you will see in this report, have narrowed in some cases, but not as much as we would have hoped. Our hope is that this report will stimulate discussion in the community and lead to more effective efforts to help all students reach high standards.

A DEMOGRAPHIC VIEW

Students in WCPSS are drawn from a larger community of Wake County and North Carolina citizens. It may be helpful to understand more about that larger community in order to evaluate the performance of our school system and to identify the areas in which we may learn from our peer school districts.

WAKE COUNTY POPULATION BY RACE

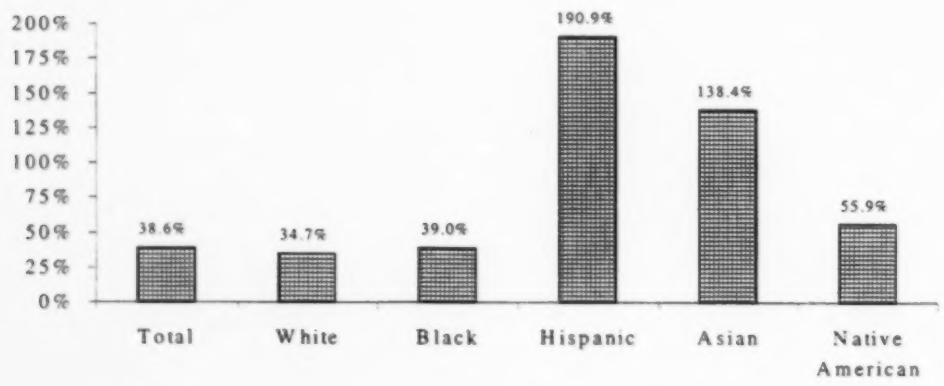
Wake County is a richly diverse area with a growing population. The figures below show the 1990 U.S. Census count and the 1999 U.S. Census estimates for Wake County by race. As shown in the following figures, the entire county, along with the White and Black groups that compose more than 90% of the population, grew more than one-third during the decade. Other minority groups grew much more rapidly during the decade, compared to their population in 1990.

U.S. Census Bureau Population Estimates by Race

	Total	White	Black	Hispanic	Asian	Native American
1990	423,380	318,615	88,057	5,396	8,177	1,148
1999	586,940	429,079	122,390	15,699	19,493	1,790
% Gain	+38.6%	+34.7%	+39.0%	+190.9%	+138.4%	+55.9%

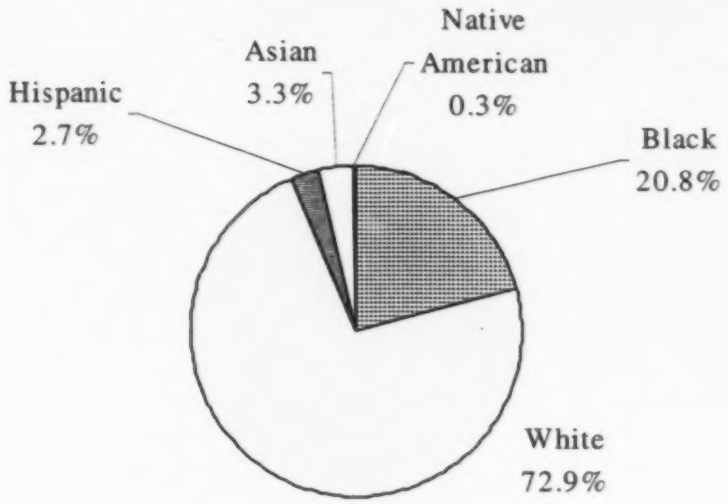
Note: Subgroup populations do not add exactly to the total because of Census Bureau estimation methodology.

Rate of Population Growth by Race from 1990 to 1999



The Hispanic, Asian, and Native American populations still compose only a small percentage of the overall population of the county in 1999. However, if growth rates continue into the coming decade, their presence will have an impact on both the county and the school district.

Estimated Wake County Population Distribution by Race in 1999



WAKE COUNTY CHILDREN IN POVERTY

Based on data from the U.S. Census Bureau's model-based income and poverty estimates, about 13% of the total population of Wake County were below the poverty line in 1997, with about 11% of children living in poverty. At the same time, Wake County had, by far, the highest median household income of the five largest urban counties in North Carolina.

County	Total Population (1999 estimate)	Median Household Income (1997)	Persons below Poverty (1997 model-based estimate)	Children below Poverty (1997 model-based estimate)
Wake	**586,940**	**$51,391**	**12.6%**	**11.3%**
Mecklenburg	648,400	$45,350	9.7%	14.7%
Guilford	391,380	$39,721	11.2%	17.3%
Forsyth	288,810	$39,536	10.8%	16.2%
Durham	204,097	$40,007	12.4%	19.4%

POPULATION COMPARISONS WITH OTHER URBAN COUNTIES IN NORTH CAROLINA

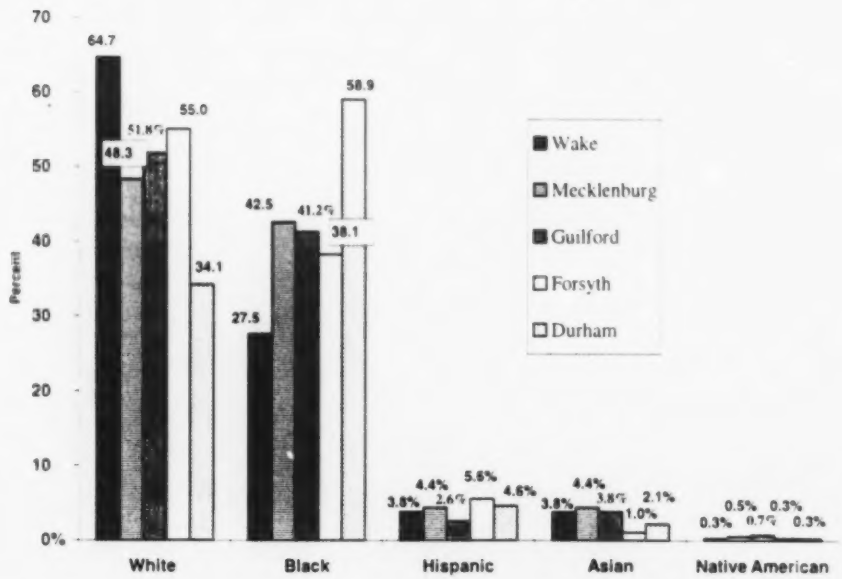
Among the urban counties in North Carolina, Wake County is closest in size to Mecklenburg County. In terms of racial makeup, Wake County most closely resembles Forsyth County and is least similar to Durham. In all counties except Durham, White residents represent the largest group (68 to 73 percent).

County	Total Population (1999 estimate)	White	Black	Hispanic	Asian	Native American
Wake	**586,940**	**73.1%**	**20.9%**	**2.7%**	**3.3%**	**0.3%**
Mecklenburg	648,400	67.8%	26.5%	2.7%	2.8%	0.4%
Guilford	391,380	69.6%	26.6%	1.7%	1.8%	0.5%
Forsyth	288,810	72.0%	25.2%	1.7%	1.1%	0.2%
Durham	204,097	57.5%	37.5%	2.2%	2.9%	0.3%

SCHOOL SYSTEM MEMBERSHIP BY RACE

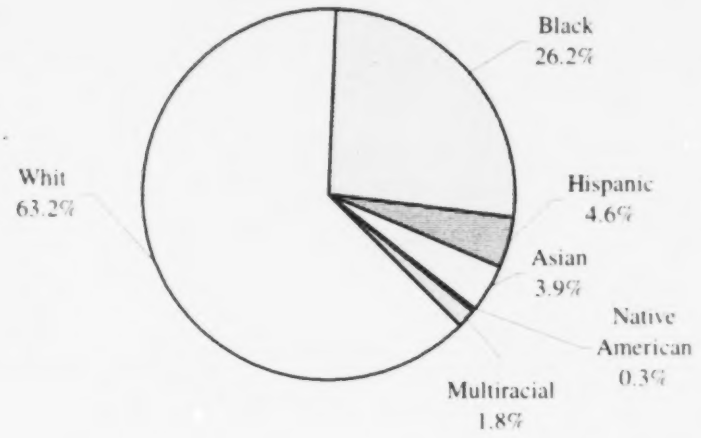
Compared to the overall county population (shown above), all the urban school systems have lower percentages of White students in their population (see graph below). In all but Durham, White students represent the highest percentage of racial groups. WCPSS's student population more closely mirrored its county's racial population than did the student populations of the other systems.

1999-2000 Pupil Membership by Race in Five Urban NC School Systems



As previously mentioned, the racial makeup of WCPSS is similar to Wake County overall. The percentage of minority students is slightly higher than that of county residents overall (37% in WCPSS versus 27% of Wake County).

WCPSS Membership by Race, 2000-01



Black students represent the largest of the minority groups, but, as noted above and as shown in the following figure, the other groups have grown at a faster rate during the past decade.

WCPSS Membership Change from 1990 to 2000 by Race

	White	Black	Hispanic	Asian	Native American
1990	43,557	16,891	466	1,425	123
2000	61,442	26,132	3,603	3,596	245
Pct Change	**+41%**	**+55%**	**+673%**	**+152%**	**+99%**

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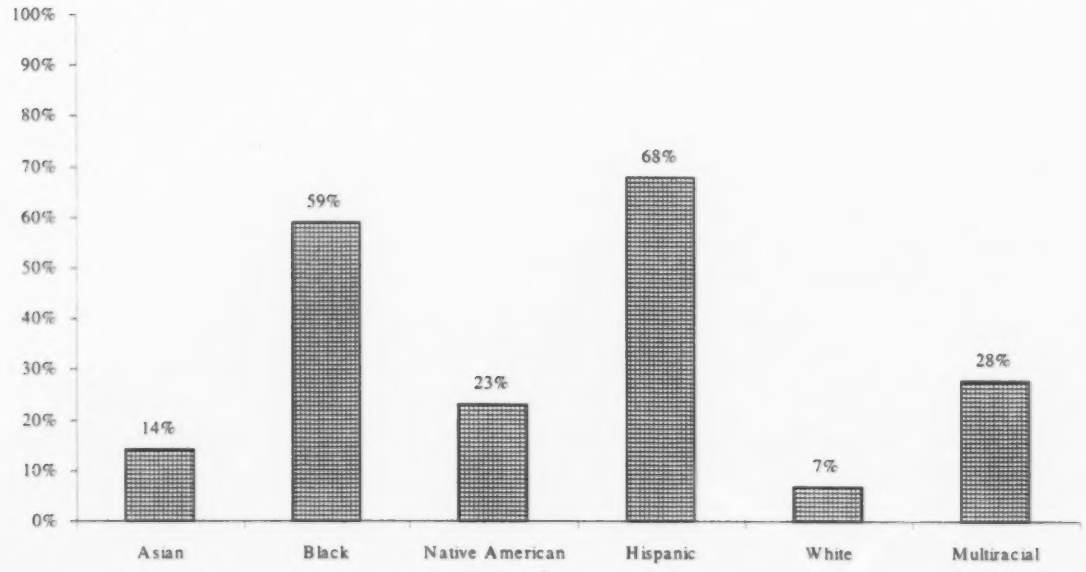
WCPSS ELEMENTARY SCHOOLS' FREE AND REDUCED-PRICE LUNCH RATE BY RACE

We chose elementary schools for calculating the free and reduced-price lunch (F/RL) rate. (Participation rates at higher grade levels yield an underestimate of the rate of poverty because older students sometimes choose not to participate in the lunch program for a variety of personal reasons.) Overall, about 25% of our elementary students receive free or reduced-price lunches, an indicator that they are from a low-income family. As illustrated in the figure below, the percentage of students in each racial group who are low income varies, with Hispanic and Black students most likely to come from low-income homes.

Elementary Schools' Free and Reduced-Price Lunch Rates by Race



WCPSS SPECIAL PROGRAMS

The table below compares the percentage representation of students from various racial backgrounds in the general WCPSS population with their representation in various special programs. Relative to their overall percentage in the WCPSS population, Black students are greatly overrepresented in the category of Behaviorally/Emotionally Disabled (BED), somewhat over-represented in the Learning Disabled (LD) category, and under-represented in the Academically Gifted (AG) category. The pattern for White students is reversed. Hispanic students are under-represented in all categories shown below, although the under-representation in the Learning Disabled rate is very small.

A recent national study at Harvard University found Black students identified for special education programs at a much higher rate than White students. For example, nationally, Black students were identified as Learning Disabled at a rate of 1.3 times the rate of White students (Mathews, 2001). This is very close to the relative rates in WCPSS for Black and While students.

The BED and LD categories have more subjective criteria for identification than a category such as Visually Impaired, which is based on an identifiable physical handicap. In that category, the distribution by race is quite close to each group's representation in the total WCPSS population. The AG program serves high-achieving students based on achievement test scores, ability, and other criteria.

Distribution of Special Program Populations by Race

	Percent of All Students	Percent of All Academically Gifted	Percent of All Behaviorally/ Emotionally Disabled	Percent of All Learning Disabled	Percent of All Visually Impaired
Black	25.8%	5.9%	65.3%	35.3%	29.8%
White	64.6%	86.7%	32.0%	58.8%	61.7%
Hispanic	4.1%	1.0%	0.8%	3.9%	2.1%
Asian	4.0%	5.6%	0.4%	0.9%	6.4%
Native Am.	0.3%	0.2%	0.3%	0.4%	0.0%
Multiracial	1.4%	0.7%	1.1%	0.9%	0.0%

ELEMENTARY AND MIDDLE SCHOOL ACHIEVEMENT

End-of-Grade Tests

North Carolina End-of-Grade (EOG) tests are given at the end of each school year in grades 3 through 8. Students receive scores in reading and mathematics, and scores are categorized into four levels that designate student proficiency. Scores that fall in Levels I and II indicate insufficient mastery of skills for success at the next grade level. Level III scores are considered to correspond to on-grade-level skills, and Level IV scores indicate mastery of skills well above those required for success at the next grade level.

As shown in the following figure, students who received free or reduced-price lunches in 1999-2000, both White and Black, were much less successful than their counterparts who did not receive free or reduced-price lunch.

Percentage of WCPSS Students Tested Who Were At or Above Grade Level on Both EOG Reading and Math Tests in 2000

Group	Percent
Black F/RL Students	41.7%
Black Students Not Receiving F/RL	65.5%
White F/RL Students	68.1%
White Students Not Receiving F/RL	91.4%
All Black Students	52.6%
All White Students	90.0%
All Students Receiving Free/Reduced Lunch (F/RL)	48.6%

Although an examination of the scores of students who received free or reduced-price lunches provides some insight into the challenge of the achievement gap, it is important to note that this provides only a very rough estimate of family-income and socioeconomic conditions for students. More exact information regarding family income is not available, and the size of the gap between Black and White students who did not receive free or reduced-price lunches and Black and White students who did receive the lunch subsidy may well be related to the distribution of family incomes above and below the subsidized lunch level.

Progress to Goal 2003: Grades 3 and 8 by Subgroup

In August 1998, the Wake County Board of Education adopted the following goal statement: *"By 2003, 95% of students tested will be at or above grade level as measured by NC EOG tests, benchmarked at grades 3 and 8."* This goal has become the focus for alignment of school improvement efforts, community involvement, and resource allocation, and annual updates on progress toward the goal have been issued by the Evaluation and Research Department (see E&R reports #01.04 and #99.32).

The following table shows that race, gender, and family income each have an effect upon student achievement. When these characteristics are combined, the gaps between groups are more dramatic than the gaps between groups defined by any one characteristic. For example, as shown in this table, only 45% of Black male students receiving free or reduced-price lunches scored at or above grade level on the third-grade reading test in 2000. This can be compared to the 95% of White females who were *not* receiving free or reduced-price lunches in 2000 who scored at or above grade level on the same test. This 50-point gap is much larger than the gaps between Black and White or male and female students.

Percent of WCPSS EOG Reading and Math Scores At or Above Grade Level for Selected Demographic Groups

Subgroups			Third Grade		Eighth Grade	
			Reading	Math	Reading	Math
Students Not Receiving Free or Reduced-Price Lunches	Males	White	93%	93%	94%	93%
		Black	69%	61%	77%	70%
		Asian	93%	95%	97%	93%
		Hispanic	88%	90%	65%	71%
	Females	White	95%	93%	97%	96%
		Black	78%	65%	86%	75%
		Asian	93%	96%	97%	97%
		Hispanic	80%	73%	87%	87%
Students Receiving Free or Reduced-Price Lunches	Males	White	71%	73%	76%	74%
		Black	45%	44%	57%	53%
		Asian	100%	95%	67%	91%
		Hispanic	48%	58%	58%	55%
	Females	White	79%	73%	85%	81%
		Black	58%	45%	69%	60%
		Asian	78%	83%	75%	81%
		Hispanic	63%	57%	59%	50%

Comparisons with Other Urban Districts in North Carolina

In "A Report Card for the ABCs of Public Education Volume II - Subgroup Statistics and Supplemental Data," North Carolina's Department of Public Instruction reports the percent of scores (not students) "at or above grade level" on each test at each grade level for demographic groups including race and gender. A composite percentage score for each subgroup combines reading, writing, and math tests across grades 3-8. This report shows that *although the achievement gap for Black and Hispanic students is similar in other large school districts in North Carolina, WCPSS students in three major racial/ethnic groups did better than same-race students statewide and in all four similar urban school districts.*

Composite Percentage of Scores in Grades 3-8 At or Above Grade Level

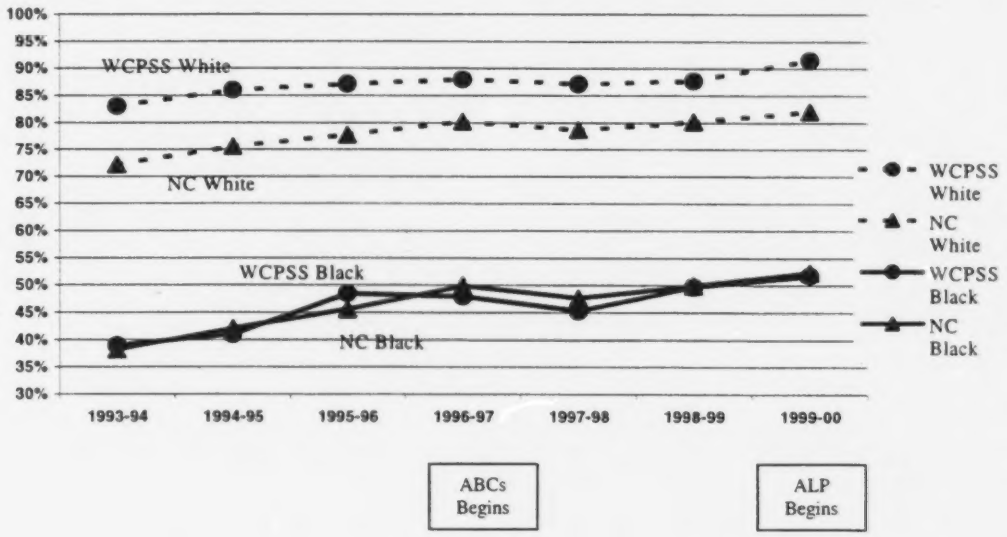
District	All Students	White Students	Black Students	Hispanic Students
WCPSS	**82.7**	**91.0**	**62.2**	**67.5**
Durham	69.1	87.7	58.7	57.8
Forsyth	74.6	86.7	58.0	55.9
Guilford	74.5	86.5	59.3	66.4
Mecklenburg	73.1	87.3	56.9	64.8
North Carolina	76.0	83.9	60.4	65.8

These scores are higher than those shown earlier because some students score at or above grade level on one test but not the other (e.g., on-grade-level for reading but not mathematics, or vice versa). "A student" can be labeled as below grade level, but one of his/her test scores can be above grade level.

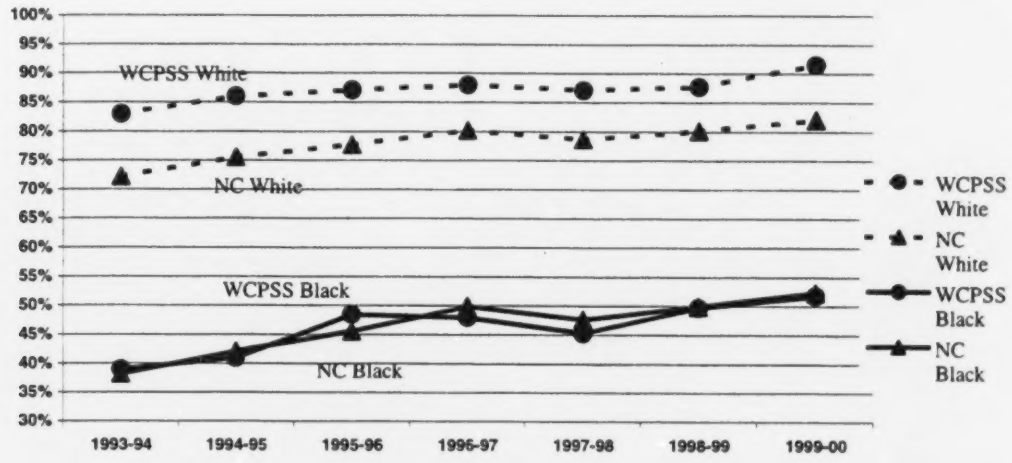
Changes over Time

As shown in the following two figures, *the gap between White and Black students in reading and mathematics test scores, both in WCPSS and across North Carolina, has changed very little in third grade during the past seven years.* Third-grade reading scores have improved more than math scores, and, since the implementation of the ABCs Accountability program, third-grade reading scores have improved more for Black students than for White students.

Percent of Third-Grade Reading Scores At or Above Grade Level over Time

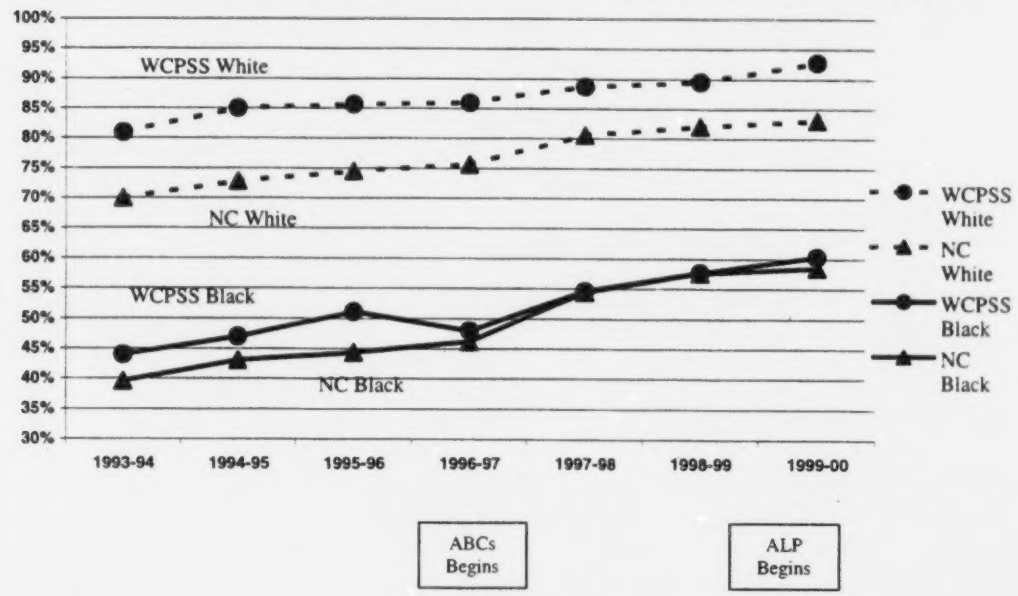


Percent of Third-Grade Math Scores At or Above Grade Level over Time

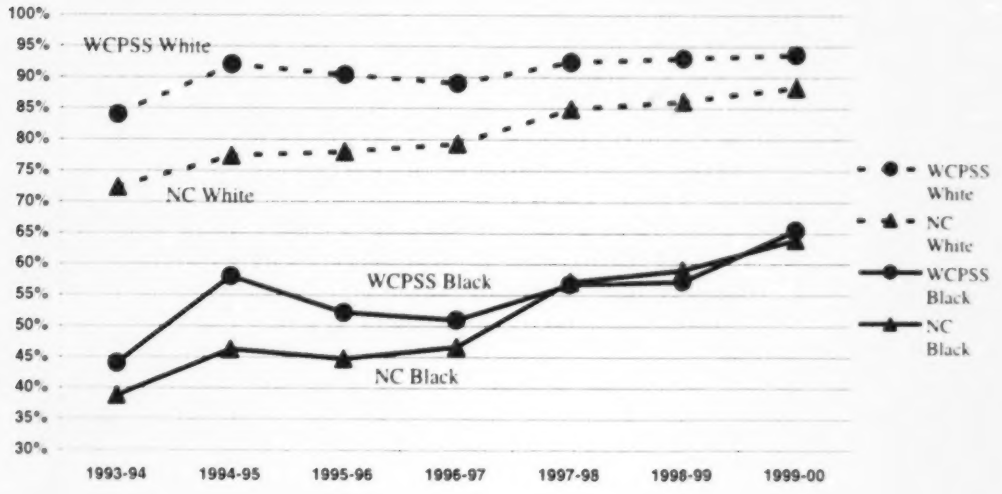


The achievement gap has closed more in eighth grade than in third grade, both in reading and mathematics. The size of the gap in reading in WCPSS has shrunk from about 30 percentage points in 1995-96 to about 20 points in 1999-2000. In eighth-grade math, the gap has shrunk from almost 40 points to less than 30 points. As in third grade, most of the eighth-grade improvement has occurred since the implementation of the ABCs program.

Percent of Eighth-Grade Reading Scores At or Above Grade Level over Time



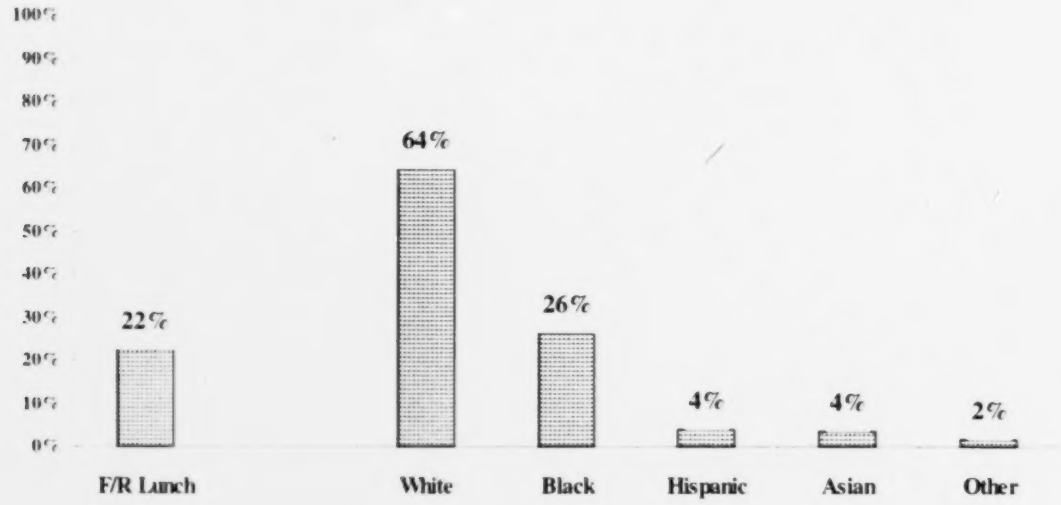
Percent of Eighth-Grade Math Scores At or Above Grade Level over Time



Characteristics of the Four Achievement Level Groups

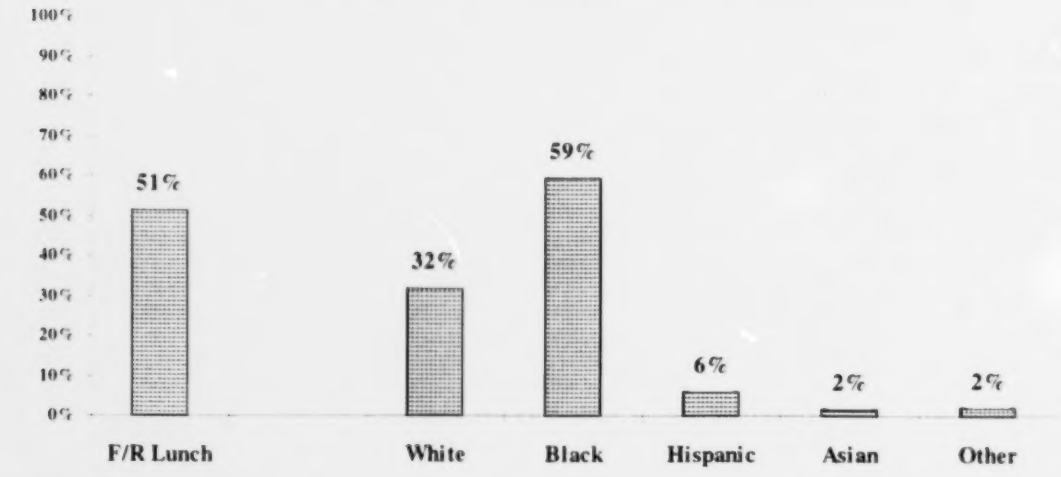
One way of describing the achievement gap is to examine the characteristics of students who score in the four "levels" of the EOG tests. The following figure shows the overall low-income and race characteristics of the WCPSS student population in grades 3-8 in the 1999-2000 school year. If race and socioeconomic status were not related to achievement, we would expect the characteristics of students in all levels to be similar. However, as shown, this is not true. Socioeconomics and race are highly related to EOG performance.

Characteristics of Grade 3-8 WCPSS Students in Spring 2000



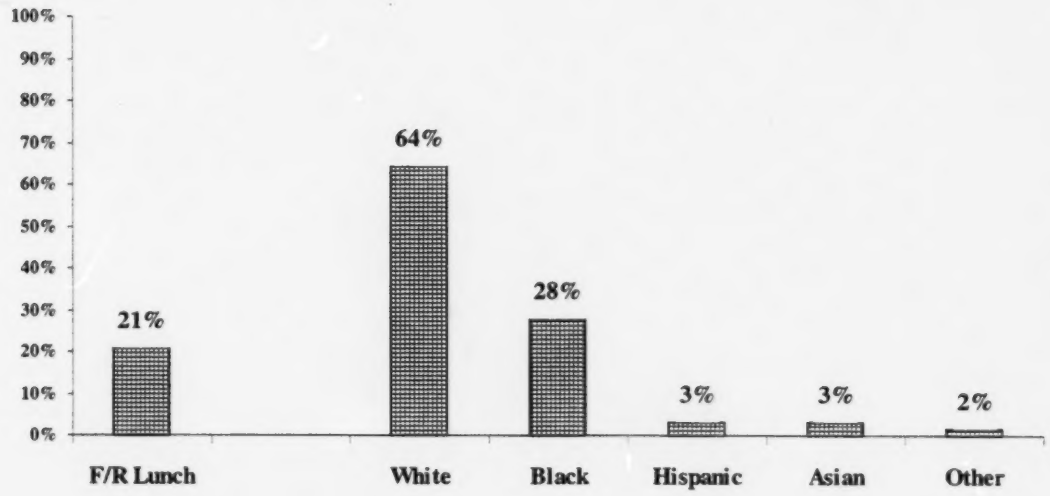
Students who score in Levels I and II are identified as probably lacking the skills needed for success in the next grade level. As shown in the next figure, these students tend to be from poor and minority families.

Characteristics of Students in Levels I-II in Spring 2000

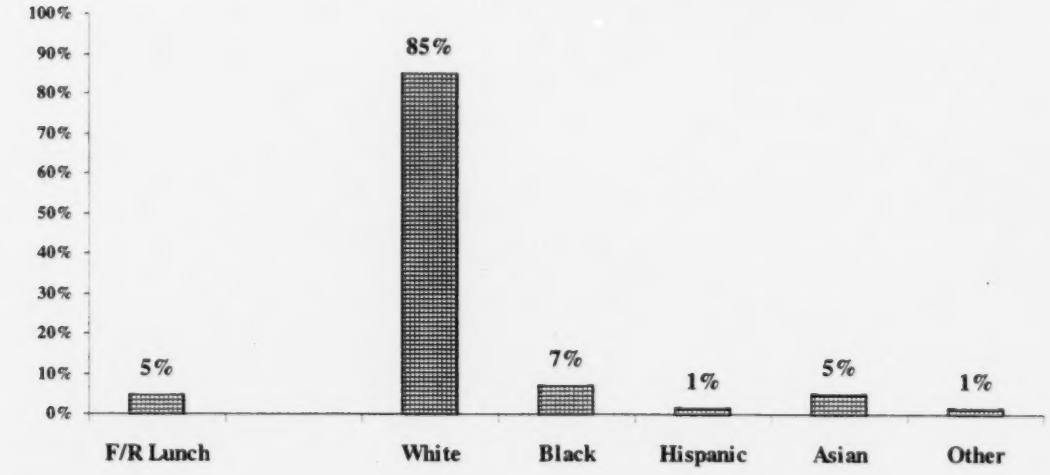


Students in who score in Level III show characteristics very similar to the districtwide population shown above. However, students in Level IV are disproportionately White, and very few of them come from low-income families.

Characteristics of Students in Level III in Spring 2000



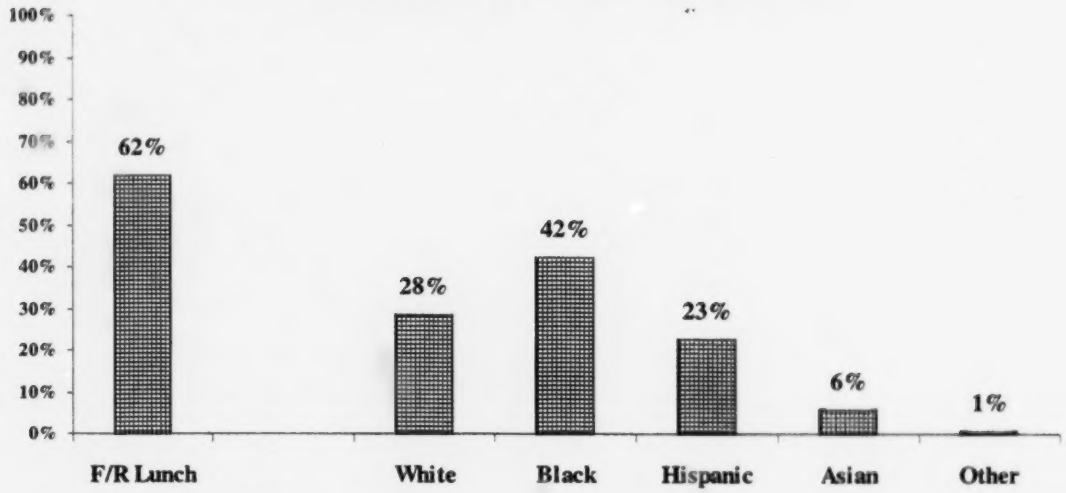
Characteristics of Students in Level IV in Spring 2000



The next figure shows the characteristics of special education students and students with limited English proficiency (LEP) who were exempted from the EOG test because they lack the skills to

achieve a meaningful score on the test. The disproportionately high rate of Hispanic students who are exempted reflects the fact that many Hispanic students are new immigrants who have not yet learned sufficient English for school success. Black students are also disproportionately exempted, and family income and race are clearly linked to exemption from the tests. The exemption rate is disproportionately low for White students.

Characteristics of Special Education and LEP Students Exempted from Testing in Spring 2000



Exemptions from tests will be significantly reduced in the 2000-2001 school year as new requirements are implemented for testing students who receive special education services. While exemptions will continue for new LEP students, new test modifications will be used to extend EOG testing to students with learning disabilities and other special conditions. It is reasonable to assume that many formerly exempted students who take the EOG tests for the first time will score below grade level. Since exempted students have been disproportionately from low-income and minority families, the reduction in the number of exemptions will result in a widening of the achievement gap described in the preceding pages.

Accomplishment of Goal 2003 will require the movement of most poor and minority students currently in Levels I and II into Levels III and IV on the EOG tests. It is reasonable to assume that as this happens, the characteristics of the top-achieving Level IV students will begin to look more like the characteristics of the entire student population. This should substantially close the high school achievement gap, which is described in the following section.

HIGH SCHOOL ACHIEVEMENT

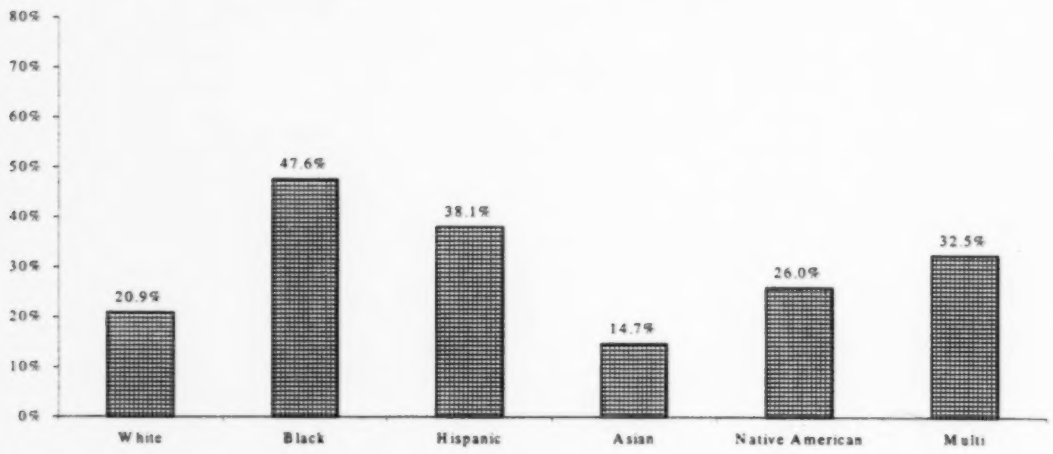
BASIC SKILLS INDICATORS

This section looks at high school achievement through two lenses. First, how well do various groups of students succeed in reaching basic standards? Second, how well do they succeed in tackling the highest levels of coursework, college preparation, and similar challenges? For high school students, free and reduced-price lunch rates are not an accurate indicator of family income because many students choose not to submit applications for the program. Therefore, results in this section are only disaggregated by race and/or gender.

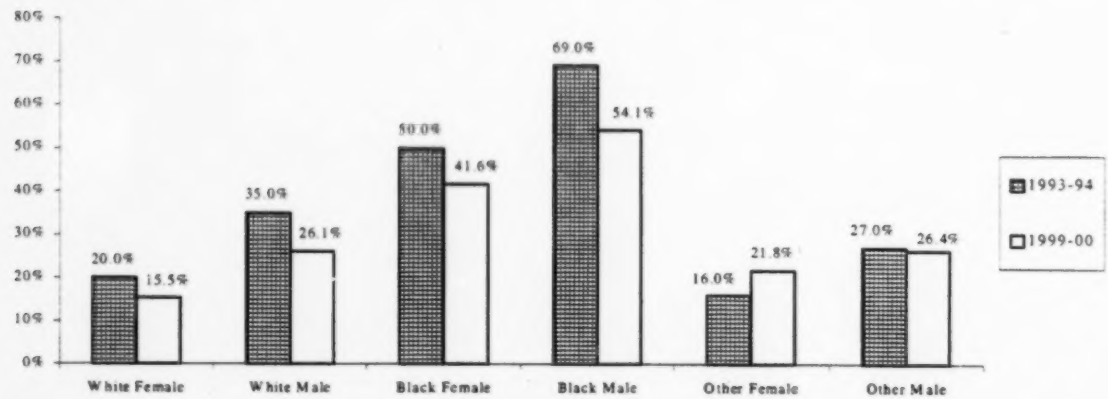
Failing Grades

Black students, followed by Hispanic students, were most likely to fail at least one course in 1999-2000. Males in *all* groups had higher failure rates than females.

Students Failing One or More High School Courses by Race, 1999-2000



Students Failing One or More High School Courses by Race and Gender
Comparison of 1993-94 and 1999-2000

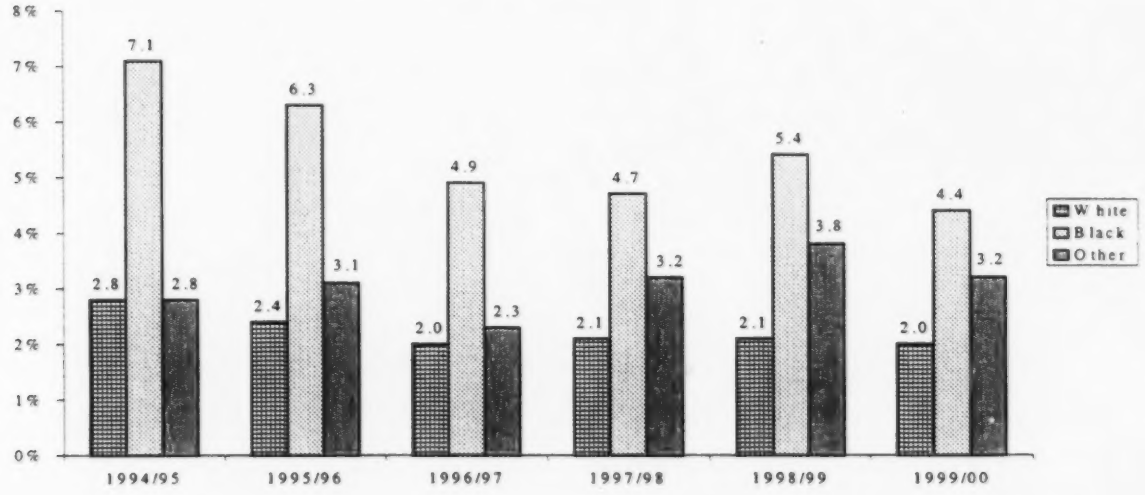


Course failure can lead to retention in grade, delayed graduation, and a greater risk for dropping out. Course failure rates improved between 1993-94 and 1999-2000, with the most improvement for Black males. However, Black students continue to have higher failure rates, and dropout rates, than other groups (see next section).

Dropout Rates (Grades 7-12)

A gap in dropout rates does exist between minority and nonminority students, with Blacks having the highest dropout rate. However, dropout rates have been declining over time, and the gap between White and Black student dropout rates has steadily narrowed (from 4.3% in 1995 to 2.4% in 2000). Dropout rates for "Other" students have not shown the same rate of improvement.

WCPSS Duplicated Dropout Rates for Grades 7-12 by Race, 1994-95 to 1999-00



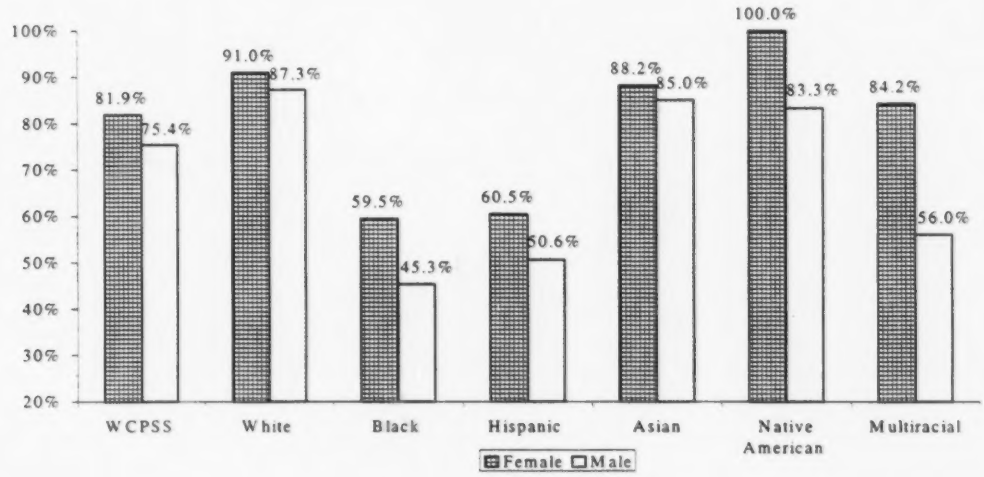
English I End-of-Course Test Results (Grade 9)

Scores on North Carolina End-of-Course (EOC) exams are grouped into four achievement levels. Students scoring in Levels III and IV are considered well prepared for the next course in the subject matter. Students who score in Levels I and II are not well prepared and may struggle in the next course.

Two of the courses required of all students are English I and Algebra I. A passing grade in English I is required for promotion to tenth grade. A passing grade in Algebra I is required for graduation.

As shown in the following figure, *fewer than half of Black males scored at Level III or IV in English I in 1999-2000, while almost 90% of White males achieved at the higher levels. Scores for Hispanic students were only slightly higher than for Black students.*

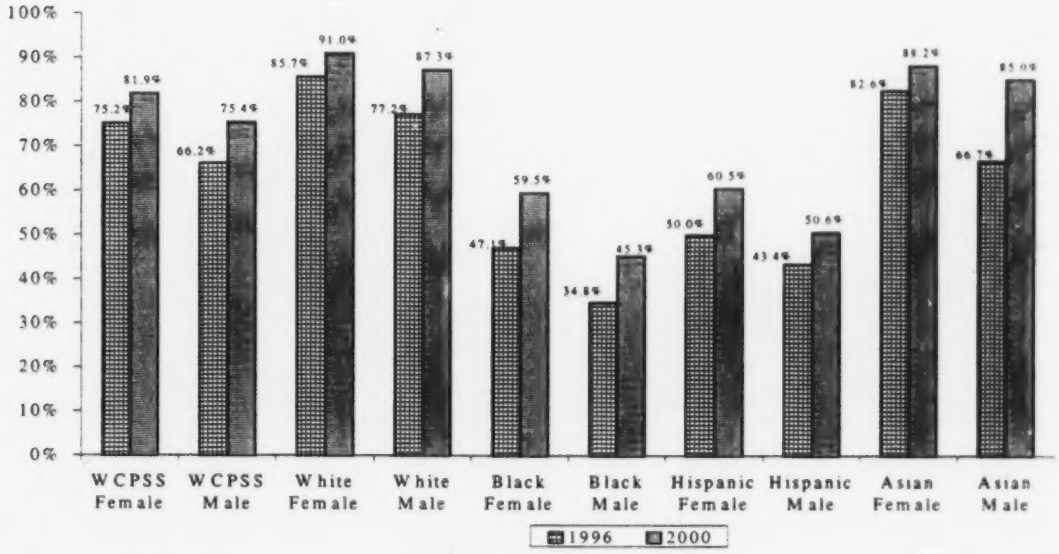
English I End-of-Course 2000
Percent at Level III and Level IV by Race and Gender



English I End-of-Course Test Results over Time

All racial groups showed improved performance on the 2000 English I EOC tests compared to 1996. Systemwide, 9.2% more males and 6.7% more females scored at Level III or Level IV in 2000 than in 1996. Asian males showed the most improvement between 1996 and 2000 (18.3%), followed by Black females (12.4%). The percentage of Black males and Hispanic females passing the test increased 10.5% from 1996 to 2000. Thus, minority students' scores are increasing at a faster rate than White students' scores, thereby closing the gap somewhat.

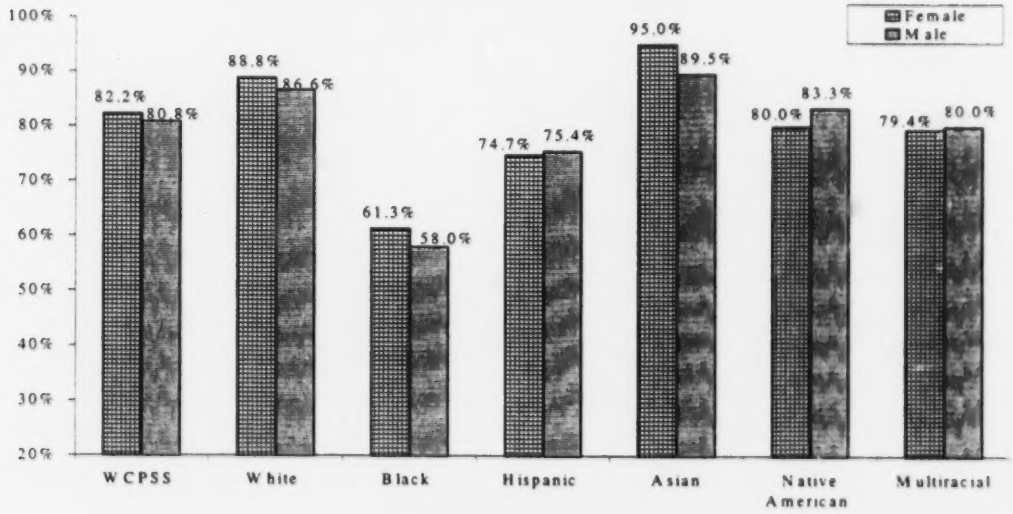
English I End-of-Course Percent at Level III and Level IV by Race and Gender: Comparison of 1996 to 2000



Algebra I End-of-Course Test Results (Grades 7-12)

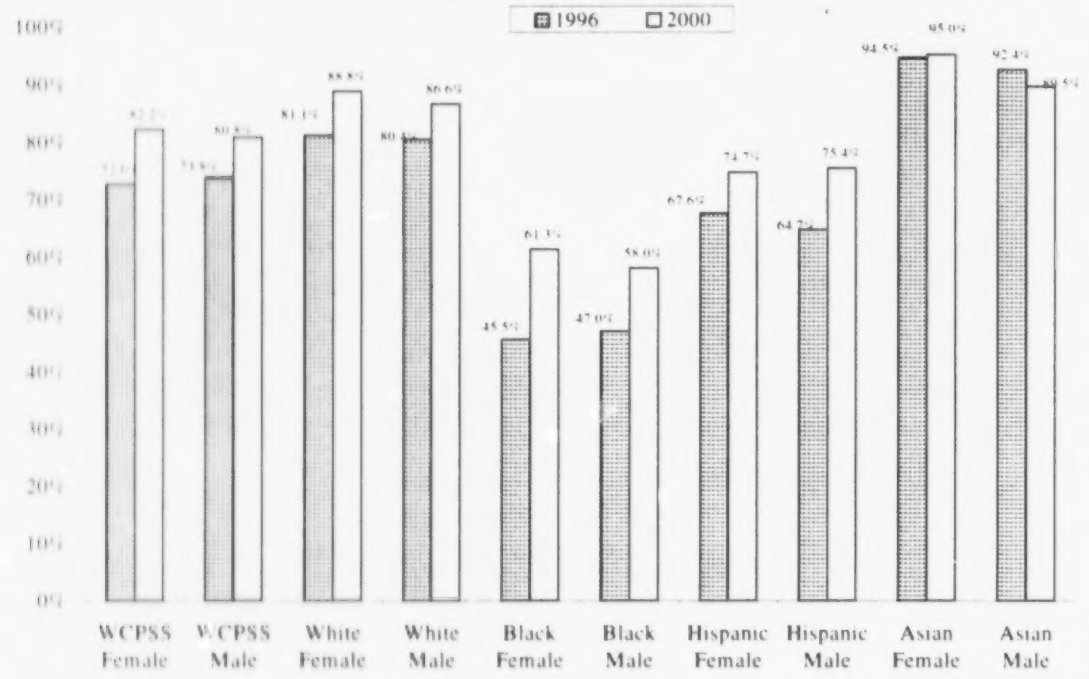
As shown in the following figure, Algebra I scores for Black male students, although higher than English I scores, were still much lower than for other groups. Hispanic students did much better on the Algebra I EOC exam than they did on the English I exam.

Algebra I End-of-Course 2000
Percent at Level III and Level IV by Race and Gender



All groups except Asian male students showed improvement between 1996 and 2000 on the Algebra I EOC exam. (Nearly all Asian male students scored at Levels III or IV both years.) The largest increase in scores was for Black female students (15.8 percentage points), with Black male and Hispanic female students also showing gains that exceeded those of White students.

Algebra I End-of-Course Percent at Level III and Level IV by Race and Gender: Comparison of 1996 to 2000



Competency Test Scores

A passing score on the North Carolina Competency Test is another requirement for graduation. Students scoring at Level III or IV on the eighth-grade EOG reading and math tests are identified as meeting or passing the competency standard. Students scoring at Levels I or II on the eighth-grade EOG tests must take the Competency Test during high school. The longitudinal results for eighth-grade students on the EOG were reported in a previous section of this report, and showed overall improvement over time. As shown below, however, the passing rate for Hispanic and Black students is much lower than for other groups. Also, the percentage of students without scores (which is often due to exemptions) differs between groups. Students without scores have not yet met the competency standard.

Passing rates for the reading test ranged from 47.5% (Hispanic) to 93.0% (White) for EOG reading at the end of eighth grade. Similarly, passing rates for mathematics ranged from 46.6% (Hispanic) to 91.6% (White).

Eighth-Grade EOG Reading Pass Rates by Race for 1999-2000

End-of-Grade Reading	White	Black	Hispanic	Asian	Native American	Multi-racial	Wake
Passed	93.0%	68.1%	47.5%	85.3%	83.3%	84.6%	84.8%
Failed	5.1%	25.3%	25.4%	6.9%	16.7%	13.8%	11.0%
Blank	1.9%	6.6%	27.1%	7.7%	0.0%	1.5%	4.2%
Total Number	4690	1778	236	259	12	65	7040

Eighth-Grade EOG Math Pass Rates by Race for 1999-2000

Math	White	Black	Hispanic	Asian	Native American	Multi-racial	Wake
Passed	91.6%	61.1%	46.6%	87.6%	75.0%	78.5%	82.1%
Failed	6.5%	32.6%	26.3%	6.2%	25.0%	20.0%	13.9%
Blank	2.0%	6.4%	27.1%	6.2%	0.0%	1.5%	4.1%
Total Number	4690	1778	236	259	12	65	7040

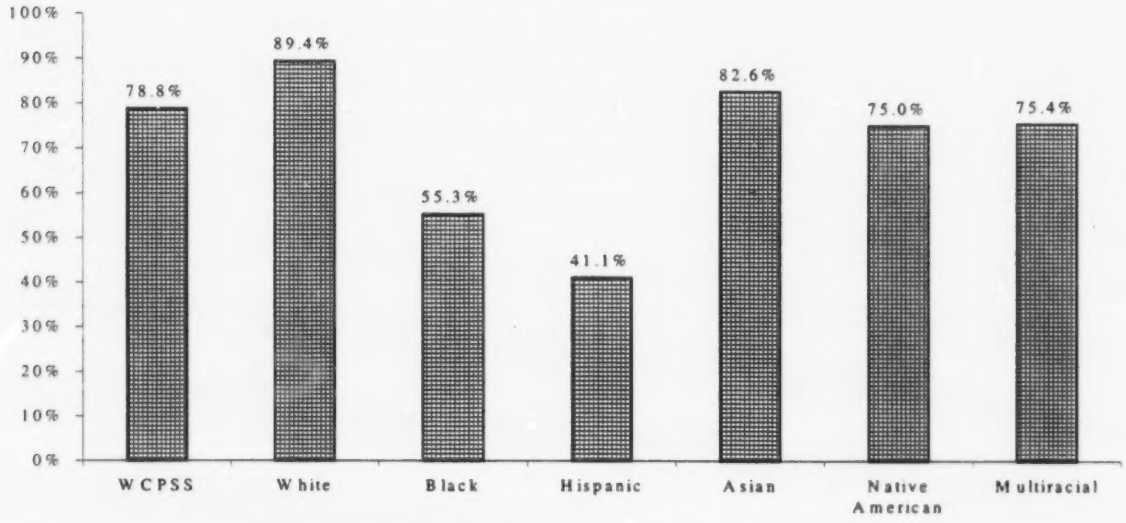
Passing rates for eighth-grade students who met the standard (passed both tests) ranged from 41.1% (Hispanic) to 89.4% (White).

Eighth-Grade Students Achieving Level III/IV on Both Reading and Math by Race

Met the Standard (Scored Level III or IV)	White	Black	Hispanic	Asian	Native American	Multi-racial	Wake
Met	89.4%	55.3%	41.1%	82.6%	75.0%	75.4%	78.8%
Not Met (in at least one area)	10.6%	44.7%	58.9%	17.4%	25.0%	24.6%	21.3%
Number of students	4690	1778	236	259	12	65	7040

As shown in the following figure, for eighth-grade students meeting the competency standard, the passing rate was more than twice as high for White students as for Hispanic students.

Eighth-Grade Students Achieving Level III/IV on Both Reading and Math by Race
NC Competency Test 1999-2000



Because all students seeking a high school diploma must pass the competency tests in reading and mathematics, students who do not meet this requirement at the end of eighth grade must take remedial classes in high school and retake the tests each semester until the competency standard is met. Students who must take remedial classes are often unable to take other electives during the school day. This limitation, in turn, may restrict students from pursuing individual academic interests and extracurricular activities that are also an important part of high school and that are associated with lower dropout rates.

The following table shows the percent of students in grades 9 through 12 who have passed the competency test, either in eighth grade or after enrolling in high school. Passing rates for each test and subgroup varied across grades 9 through 12, as shown below. The passing rates for reading ranged from 74.0% (Hispanic) to 96.3% (White). For mathematics, passing rates ranged from 70.5% (Hispanic) to 96.2% (White). The ranges for students who have met the standard (passed both tests) ranged from 67.5% (Hispanic) to 95.3% (White).

1999-2000 Competency Passing Rates by Race/Ethnicity (Percent)
Grades 9-12

	White	Black	Hispanic	Asian	Native American	Multi-racial	Wake
Reading	96.3%	80.4%	74.0%	93.7%	92.2%	83.9%	91.8%
Math	96.2%	82.2%	70.5%	90.4%	92.2%	86.5%	92.0%
Met Standard	95.3%	76.1%	67.5%	89.8%	92.2%	78.1%	89.7%

Clearly, the North Carolina Competency Test is a major hurdle for Hispanic and Black students. As the State Board of Education contemplates higher standards and a more difficult high school exit exam, we can anticipate a need for much greater levels of support for students to meet even higher standards.

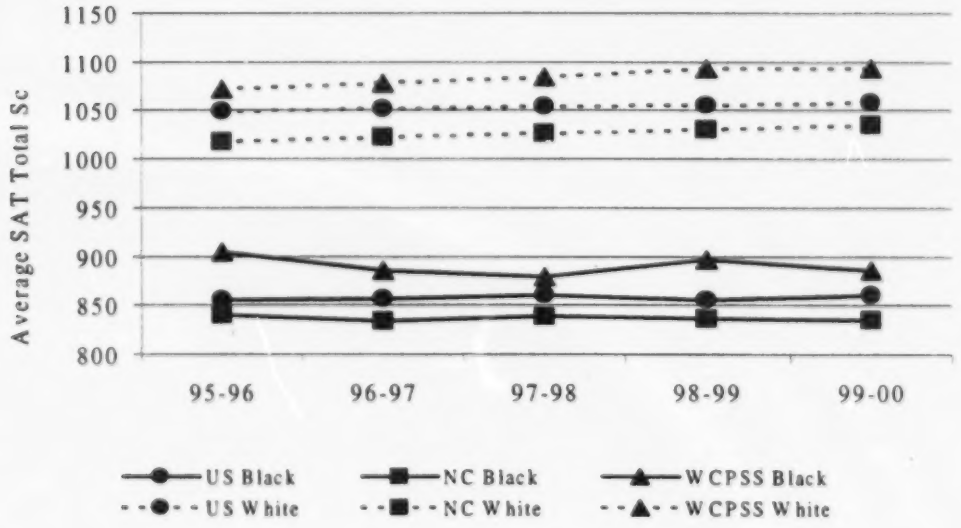
SAT Scores in WCPSS and Comparisons with North Carolina and the Nation

The Scholastic Achievement Test (SAT I) is widely used as part of the college admission process. Although the test is not taken by all high school students, many students in North Carolina take the SAT because it is required for admission to colleges in the University of North Carolina system.

The average SAT score for WCPSS seniors in 1999-2000 was 1061, the second highest in the state. However, as shown below, there is a large gap between the average scores of Black and White students.

Scores for White students in North Carolina and WCPSS have been steadily rising for the past five years. Scores for Black students, however, have remained significantly lower than for White students and have not shown the same improvement trend seen for White students. Although scores for Black students in WCPSS remain above the state average, the lack of improvement is troubling.

Average SAT Total Scores from 1996 to 2000

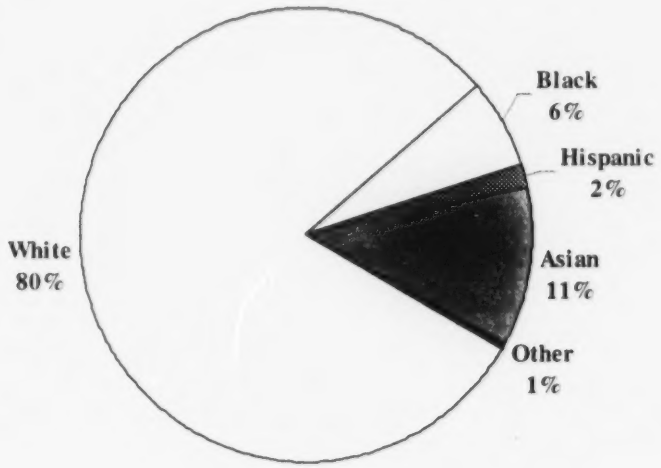


ADVANCED SKILLS INDICATORS

Advanced Placement Course Enrollment

Advanced Placement (AP) courses offer a college-level curriculum in a variety of subjects. Students taking AP courses may take AP exams that can lead to accumulation of college credit. As shown in the following figure, White and Asian students are over-represented in these courses (relative to their percentage in the overall school system). Black students are under-represented. *Enrollment in AP courses in WCPSS in 2000-01 is composed largely of White students.*

WCPSS Enrollment in AP Courses in the 2000-2001 School Year



Results of AP Exams by Race

The next figure shows AP participation rates and exam performance by race in 1999-2000. Similar to course enrollment, *White and Asian students were over-represented* in terms of exam participation rates. *Black students were greatly under-represented*, with only 4% of tests taken by Black students while 24% of that year's high school population was Black.

Performance on the AP exam also differed by race. Scores of 3 or more on a 5-point scale earn students college credit for the courses. In this case, the 61 students who marked "Other" for race had the highest percentage of exams with scores of 3 or more (87%). The next highest percentages of groups scoring 3 or more were Asians (80%), Whites (78%), Hispanics (75%), and Native Americans (73%). *Black students had the lowest percentage of scores of 3 or more (61%). However, the 1999-2000 passing rate for Black students (60.8%) was 4.5% higher than the previous year (56.3%).*

WCPSS High School Enrollment and AP Results by Race (1999-2000)

Race	H.S. Population in WCPSS Fall 1999		H.S. Students Taking AP Exams		Exams Given	AP Exams with Scores ≥ 3	
	# of H.S. Students	% of H.S. Students	# Taking Exam	% Taking Exam	# of Exams	# Scoring ≥ 3	% Scoring ≥ 3
Not Stated	N/A	N/A	22	1.1%	42	28	66.7%
White	16,932	68.6%	1,580	78.8%	2,932	2,301	78.5%
Black	5,925	24.0%	80	4.0%	130	79	60.8%
Hispanic	602	2.4%	42	2.1%	80	61	75.0%
Asian	973	3.9%	206	10.3%	477	380	79.7%
Native American	56	.2%	13	.6%	22	16	72.7%
Other	195	.8%	61	3.0%	123	107	87.0%
Total:	**24,683**	**100%**	**2,004**	**100%**	**3,806**	**2,972**	**78.1%**

The following figure shows performance on four AP exams by race for WCPSS and students worldwide (Camera and Schmidt, 1999). As shown in this figure, *WCPSS outperformed global indicators for all exams and all racial categories.*

AP Results by Race:
WCPSS Compared to Global Results for Four AP Courses

Race	Type of Score	AP Course Examination							
		U.S. History		Biology		English Lit.		Calculus AB	
		WCPSS	*Global*	*WCPSS*	*Global*	*WCPSS*	*Global*	*WCPSS*	*Global*
White	*% 3+*	66.9%	64.3%	70.7%	64.5%	78.0%	70.0%	87.1%	63.1%
	Mean	3.07	3.00	3.12	3.09	3.30	3.05	3.85	2.91
Black	*% 3+*	63.3%	31.5%	75%	35.2%	50%	33.5%	72.7%	31.8%
	Mean	2.92	2.19	3.13	2.19	2.60	2.21	3.45	1.96
Hispanic*	*% 3+*	66.7%	37.1%	100%	44.6%	71.4%	47.5%	75.0%	43.8%
	Mean	2.93	2.34	3.60	2.50	3.28	2.55	3.50	2.37
Asian	*% 3+*	67.7%	59.6%	75%	69.7%	82.3%	67.0%	90.2%	64.0%
	Mean	3.21	3.00	3.11	3.30	3.18	3.03	3.92	3.00

*The number of students taking these tests was less than 12.
Note: Global indicators were not available for three categories: Not Stated, Native American, and Other.

Participation in Chemistry or Physics

Chemistry and physics are elective science courses usually taken by students who intend to go on to college. As shown in the following figure, almost 80% of White and Asian students completed either chemistry or physics by the end of the 12th-grade year. Less than half of the students in the other racial groups completed one of these courses. This may reflect lack of preparation in the years leading up to graduation and/or low aspirations for future education for minority students.

Seniors Who Enrolled in Chemistry or Physics, 1999-2000

	Number of 12th-Grade Students	Percent Completing Chemistry or Physics
White	3574	78.7%
Black	1040	44.6%
Hispanic	82	48.8%
Asian	227	82.8%
Native American	12	41.7%
Multiracial	28	42.9%

UNDERSTANDING THE GAP

STUDENT MOBILITY VERSUS STABILITY

Many factors outside the control of the school can affect student performance. One such factor is student mobility. In general, mobility refers to the percentage of students who do not end the school year in the same school in which they first enrolled. In 1999-2000, 8.7% of WCPSS who started the year in one school did not end the year at the same school. Students receiving free/reduced-price lunch (F/RL) were twice as likely as other students to leave a school during the year (15.2% of F/RL students changed schools, compared to 7.1% of non-F/RL students). The figure below shows the percentage of students who remained or did not remain in the same school during the 1999-2000.

School Stability of Students Not Receiving Free/Reduced-Price Lunch (75,764 students)

Gender	Same School?				All	
	No		Yes			
	Number	%	Number	%	Number	%
Female	2,468	6.7%	34,585	93.3%	37,053	48.9%
Male	2,895	7.5%	35,816	92.5%	38,711	51.1%
Total	**5,363**	**7.1%**	**70,401**	**92.9%**	**75,764**	**100.0%**

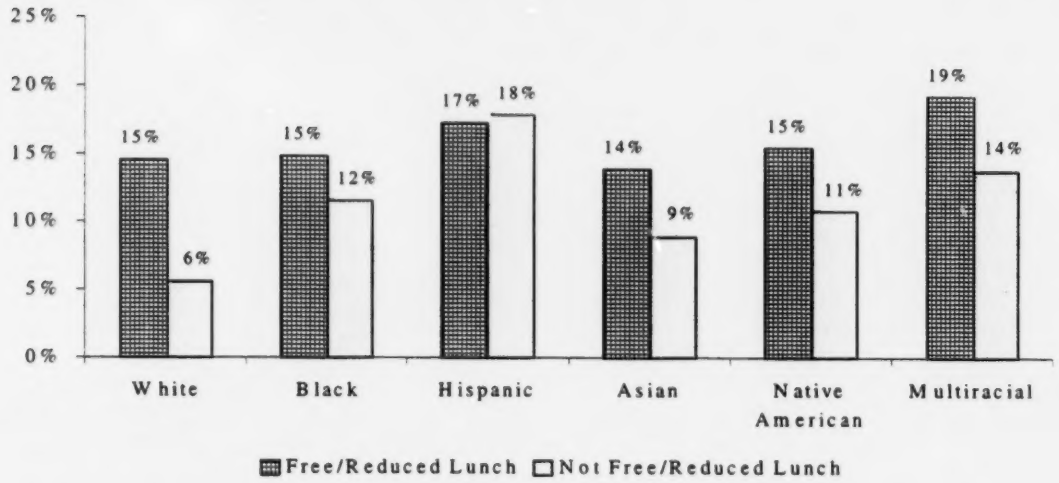
School Stability of Students Receiving Free/Reduced-Price Lunch (18,795 students)

Gender	Same School?				All	
	No		Yes			
	Number	%	Number	%	Number	%
Female	1,348	14.6%	7,890	85.4%	9,238	49.2%
Male	1,502	15.7%	8,055	84.3%	9,557	50.8%
Total	**2,850**	**15.2%**	**15,945**	**84.85%**	**18,795**	**100.0%**

As shown in the above charts, socioeconomic factors clearly affect stability and there appear to be some slight gender differences as well. The tables that follow illustrate racial differences in these patterns. Results for WCPSS in 1999-2000 indicated only slight racial/ethnic group differences in mobility for students from families eligible for free or reduced-price lunches. The percent of mobility for low-income (F/RL) groups only ranges from 14% to 19%.

However, among families *not* receiving free/reduced-price lunches, instability ranges from 5.6% for White students to 17.9% for Hispanic students. This range may reflect the wide range of family incomes represented in the non-F/RL group and the uneven distribution of racial/ethnic groups across that range, although that explanation seems unlikely to account for all of the differences. Nevertheless, future research could be helpful in illuminating this issue.

Racial Differences in Percent of Students Changing Schools in WCPSS During 1999-2000 by Income Levels



School Stability of Students Not Receiving Free/Reduced-Price Lunch by Race

Race	Same School?				All	
	No		Yes			
	Number	%	Number	%	Number	%
White	3,271	5.6%	54,657	94.4%	57,928	76.5%
Black	1,388	11.6%	10,617	88.4%	12,005	15.8%
Hispanic	270	17.9%	1,239	82.1%	1,509	2.0%
Asian	280	8.9%	2,871	91.1%	3,151	4.2%
Native American	22	10.8%	182	89.2%	204	0.3%
Multiracial	132	13.7%	835	86.3%	967	1.3%

School Stability of Students Receiving Free and Reduced-Price Lunch

Race	Same School?				All	
	No		Yes			
	Number	%	Number	%	Number	%
White	514	14.6%	3,014	85.4%	3,528	18.8%
Black	1,841	14.9%	10,498	85.1%	12,339	65.7%
Hispanic	358	17.3%	1,717	827.0%	2,075	11.0%
Asian	65	13.9%	402	86.1%	467	2.5%
Native American	8	15.4%	44	84.6%	52	0.3%
Multiracial	64	19.2%	270	80.8%	334	1.8%

STUDENT CHARACTERISTICS

Kindergarten Readiness

Gaps appear in children's achievement even upon entry to kindergarten. These gaps are evident nationally, as well as in WCPSS. Differences in the richness of home environments, child nutrition, parents' ability to provide learning opportunities for their children, and in the quality of preschool or day care that is affordable for high and low income parents account for some of these differences. A key way children learn in the early years is through the richness of their learning environments, and abundant medical, scientific, and educational research has found that ages 0-3 are critical years for brain development, which contributes to children's long-term ability to learn (Baenen, 1999).

Children's likelihood of having problems later in school can be statistically predicted at birth. Low birthweight is often due to insufficient prenatal care, maternal nutrition, or maternal at-risk behaviors. Students with low birthweights are more likely to be enrolled in special education classes, to repeat a grade, or to fail school than children with normal birthweights. Black children show low birthweights at twice the rate of all other racial groups (13% versus 6 to 7%) (National Education Goals Panel, 1997).

In WCPSS, free preschool is provided primarily to students already identified as special education; low income parents have little opportunity for free, high quality preschools (unlike some other districts and states). Studies have found providing preschool can have lasting benefits for positive academic outcomes for students, and many districts therefore offer such programs, especially to low income parents (Baenen, 1999).

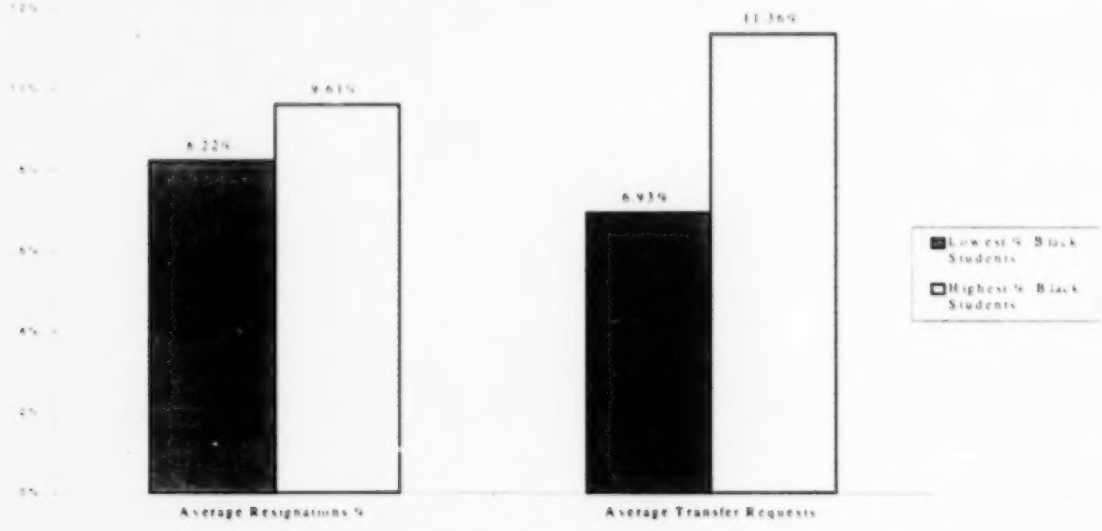
Children who enter WCPSS schools are assessed with an instrument called the Kindergarten Initial Assessment, which determines whether they have skills generally expected of entering kindergartners for academic purposes. In 1997-98, most students entered with strong readiness skills. On an individual student basis, students lacked an average of 6.3 of the 41 skills. Some students, however, are significantly behind their peers. Twenty percent lacked 10 or more skills. About 5% of the entering kindergarten students were designated as limited in English proficiency.

To focus on the gap issue for this report, we used fall 2000 data to examine whether the number of skills students lacked upon kindergarten entry varied for the five schools with the highest and lowest number of Black students in WCPSS. A difference *did* exist, with students in schools with high Black enrollment lacking 7.0 skills on the average, compared to 4.8 in the low Black enrollment schools. It is important to note that we also found a *large difference* in the percentage of *low-income* (F/RL) students in these schools (5% low income in the schools with the fewest Black students and 41% in the schools with the most Black students). This illustrates the relationship between racial background and income.

STAFF CHARACTERISTICS AND TURNOVER

Nationally, there is tremendous concern that the students most at risk of school failure attend schools with the least qualified teachers and the greatest levels of teacher turnover (NCES, 1996). In WCPSS, this problem does not seem to be severe, at least based on the data we had available for this report. We compared the five schools with the lowest percentages of Black students to the five schools with the highest concentration of Black students on a variety of measures. (Larger percentages of Black students in WCPSS show low achievement on EOG than other groups.) Three of the five schools with the highest concentration of Black students are magnet schools offering specialized curricula. On some measures, there were slight differences between the two groups of schools that suggested a possible problem, but not so on other measures. For example, the percentage of teachers with lateral entry (i.e., without teaching credentials) did not differ significantly (2.82% versus 2.87%) in the two groups of schools. Teachers in the five schools with the lowest average enrollment of Black students did experience a slightly lower rate of resignations (8.22% for schools with lowest Black enrollment versus 9.61% for those with highest) and a considerably lower rate of transfer requests.

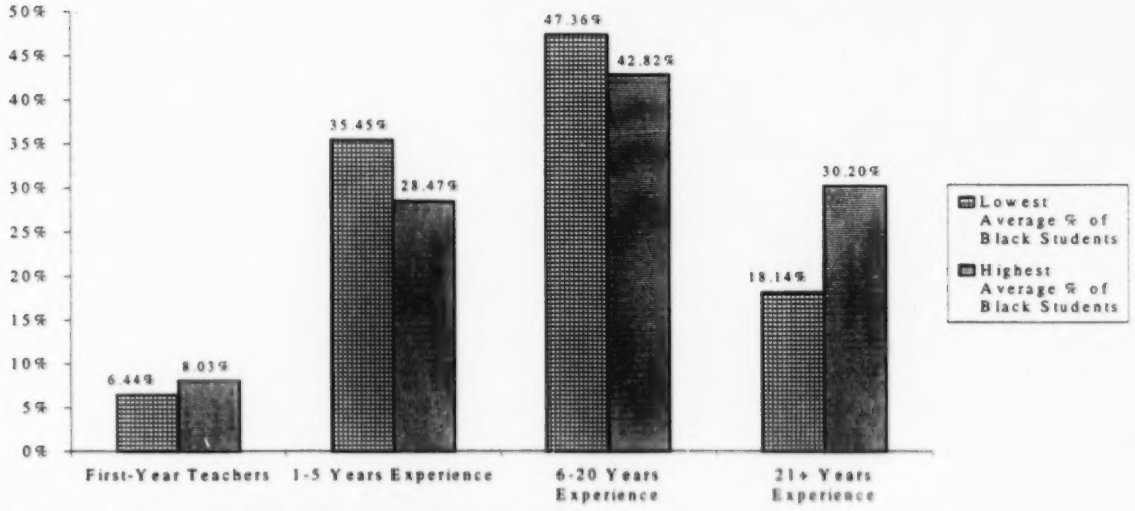
Average Staff Turnover for WCPSS Schools with the Lowest and Highest Black Student Enrollment (2000-01)



Source: Data from the WCPSS Human Resource Department

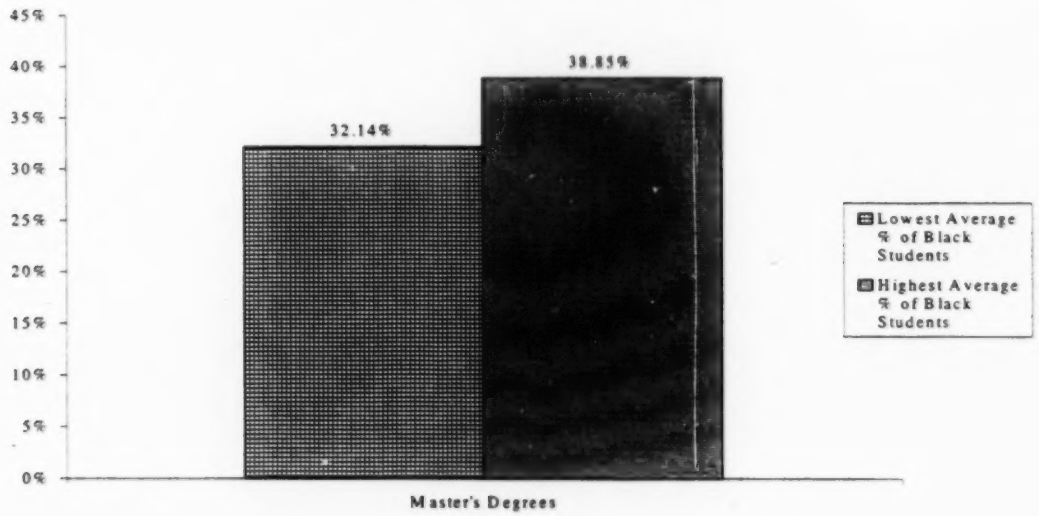
The schools with the highest percentage of Black students had more teachers with the very highest levels of experience (21 years or more), as shown on the next page. These schools *also* had slightly more first year teachers, however, and fewer teachers in the categories of 1-5 and 6-20 years of experience. WCPSS schools with the highest percentage of Black students had slightly more teachers with a master's degree than the comparison schools. Thus, it appears that schools with the highest percentage of Black students are not at a clear disadvantage in terms of teacher quality, perhaps due in part to additional staffing at the district's program magnets.

Average Years of Experience for Teaching Staff in WCPSS Schools with the Lowest and Highest Black Student Enrollment (2000-01)



Source: Data from the WCPSS Human Resources Department

Teachers with Master's Degrees in WCPSS Schools with the Lowest and Highest Black Student Enrollment (2000-01)



Source: Data from the WCPSS Human Resource Department

SCHOOL CLIMATE

Common sense tells us that students are more likely to learn in an environment that meets their needs and challenges them, and in which they feel safe and welcome. Our WCPSS Parent Survey data give one indication of how well the WCPSS schools meet students' needs, at least through the eyes of their parents. Elementary school parents provided the highest survey return rates, and therefore the most accurate data. Tables for this report use elementary school parent data only.

One indication of difference among parents of different racial/ethnic groups is the perceptions of Hispanic parents about their child's school, as noted in the two tables that follow. Although they do not seem particularly concerned about race relations (see second table), they generally give the schools lower marks on safety, communication, support from the school, and other factors. Black parents, on the other hand, were less favorably impressed with the race relations at their child's school than other groups. Their responses on other questions were quite similar to responses of White parents.

1999 Elementary Parent Survey
Percent of Parent Respondents Who Agree or Strongly Agree

	White	Black	Hispanic	Asian
My child's school is a safe place to learn.	94.0%	92.7%	82.8%	93.6%
My child is given challenging work in all classes.	80.9%	83.1%	70.8%	74.5%
When I have a concern about my child, I can count on the school for support.	82.2%	83.0%	74.8%	83.2%
I feel comfortable visiting my child's school.	96.3%	94.8%	82.9%	96.3%
This school's programs help students understand and get along with other people.	83.5%	81.6%	76.4%	88.1%
I receive enough communication from the school to keep me informed of its activities.	94.0%	94.4%	82.5%	94.1%

1999 Elementary Parent Survey
Item: "Race relations at my child's school are: ... "

Race	Excellent	Very Good	Good	Fair	Poor	Don't Know
White	17.0%	31.4%	32.2%	6.0%	1.0%	12.5%
Black	13.6%	19.9%	33.7%	14.3%	3.2%	15.5%
Hispanic	27.7%	20.0%	31.9%	7.4%	1.9%	11.2%
Asian	21.6%	23.1%	34.7%	6.4%	1.5%	12.7%
Native American	14.8%	29.5%	24.6%	19.7%	3.3%	8.2%
Multiracial	16.1%	25.1%	30.4%	10.2%	2.6%	15.6%

One area demonstrating significant differences among parent groups was whether the parents had met with their child's teacher or school administrator in the last 12 months. Only 65.3% of Hispanic parents had met with their child's teacher or administrator, while 95.7% of White parents had done so. Although the percentage of Black parents reporting that they had met with their child's teacher (80.5%) was higher than for Hispanic parents, it was still significantly below the percentage for White parents. Determining the reason for these differences—and how to change them—may be an important component in any plan to address the racial and poverty gaps in our community.

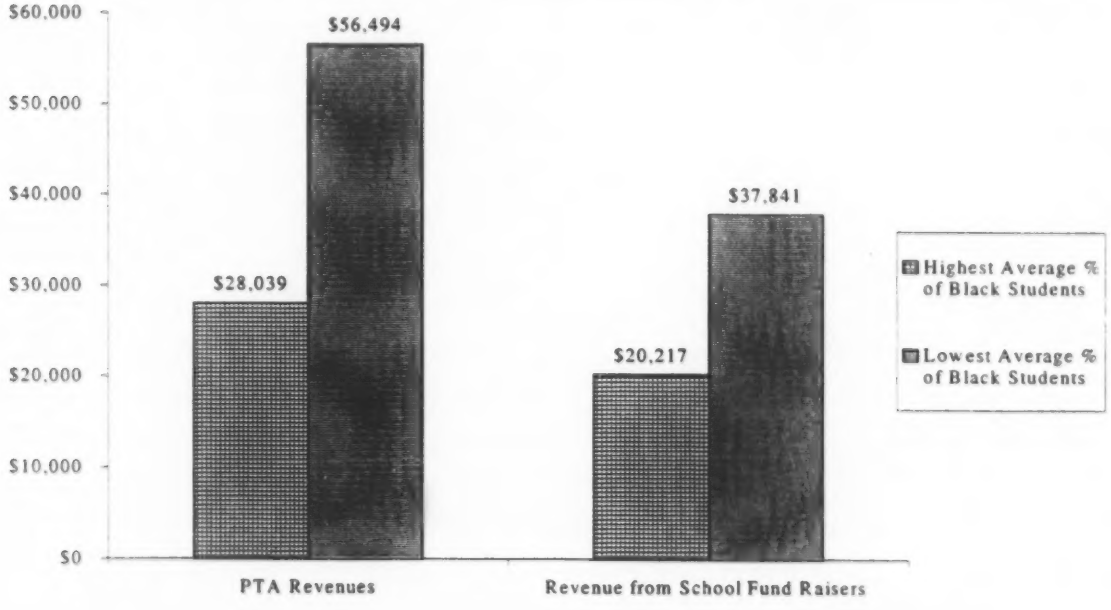
1999 Elementary Parent Survey
Item: "During the last 12 months, I have met with a teacher or administrator about my child."

Race	% Responding Yes
White	95.7%
Black	80.5%
Hispanic	65.3%
Asian	80.8%
Native American	90.3%
Multiracial	88.8%

PARENT AND COMMUNITY INVOLVEMENT

A comparison of the five schools with the lowest percentage of Black student enrollment and the five schools with the highest percentage of Black student enrollment showed a significant difference in independent financial support by the community. Schools with a low percentage of Black student enrollment were able to raise 87% more through school fund raisers than schools with a high percentage of Black students (an average of $37,840 versus $20,217, respectively). Budgets for the respective parent-teacher associations (PTAs) at these schools showed that schools with a low percentage of Black students had PTA budgets twice the size of the schools with the most Black students. This data further points to the high correlation between race and income. Schools with less supplemental income beyond normal allotments may be less able to improve the academic climate through expenditures such as technology, writers-in-residence, improvements to grounds, or other enhancements.

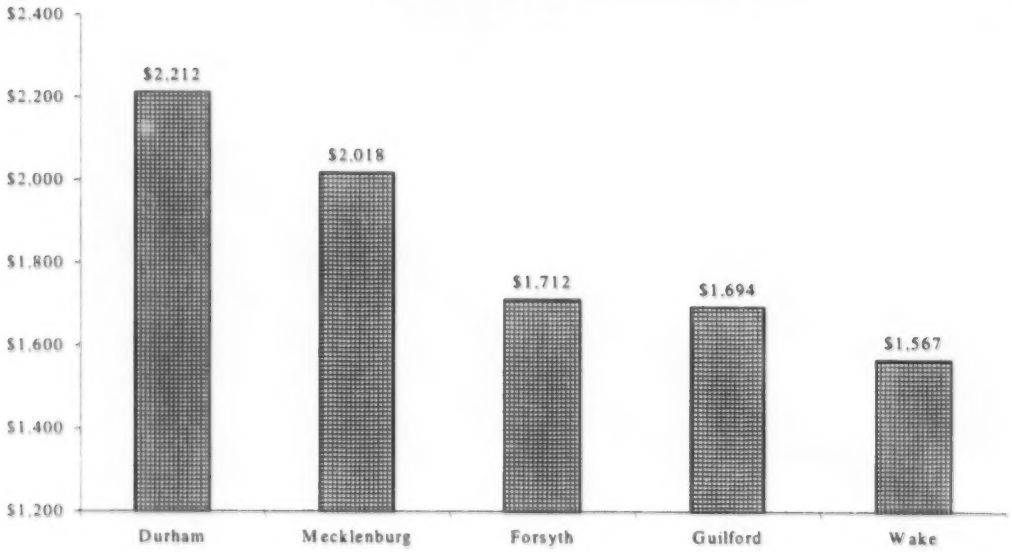
Fund-Raising Capabilities in Schools with the Highest and Lowest Percentages of Black Student Enrollments, 1999-2000



PER-PUPIL EXPENDITURES

Resources available to address the achievement gap vary across school districts in our state. Extra support for at-risk students, increased professional development for teachers, and other activities to address the gaps outlined in this report can have significant costs. In comparison with five similar-sized school systems in North Carolina, Wake County shows the lowest *total* per-pupil expenditure, and the lowest locally-funded per pupil expenditure as well. The figure below shows the local portion of the per-pupil expenditures. The comparison school systems are Durham, Guilford, Forsyth, and Charlotte-Mecklenburg. Local per-pupil expenditures range from $2,212 in Durham to Wake County's $1,567.

1999 Per-Pupil Expenditures—Local Funds



RESEARCH ON CLOSING THE GAP

There are no "quick fixes" to closing the achievement gap between poor and middle class students, or to closing the gap between different racial groups. When researchers list the characteristics of schools that have had some success in at least partially closing the achievement gap, there is the risk of making the problems sound easy to fix.

For example, it is well documented that schools successful in closing the gap have among their characteristics "strong, effective principals" and "high expectations for students." This finding does not answer the question of how to create or find such principals at a time when fewer and fewer people seem to want the job. Similarly, the research does not identify an easy way to change expectations that teachers may have held for their professional lifetimes and that seem to have been borne out by their own experiences. Research shows that teacher expectations are important and can be changed, but that such changes are not easy to mandate.

With that caveat, some of the things that *schools* can do to diminish the achievement gaps discussed in this report include:

- Establishing high expectations for all students,
- Abolishing the tracking of students into lower level classes,
- Explicitly teaching the school's codes and customs,
- Providing professional development for teachers about diversity and cultural differences,
- Creating smaller schools or small units within schools,
- Performing ongoing assessment to monitor student progress, and
- Creating opportunities for students to have meaningful participation in school.

Other factors that also make a difference:

- Parental support of academic success, including reducing children's television viewing, supervision of homework, and other academic support,
- Collaborative partnerships that address the medical, mental health, legal and social services needs of families, and
- The fostering of resilience in at-risk children by key adults (at school and outside of school) through nurturing behaviors that promote their social competence, problem-solving skills, autonomy, and a sense of purpose and future.

Many of these findings are summarized in an excellent volume, edited by Belinda Williams: ***Closing the Achievement Gap: A Vision for Changing Beliefs and Practices*** (1996). This book builds on decades of research that documents how we can help all students succeed. A reference section is also included at the end of this report.

Another area of research that seems particularly relevant to closing the gap focuses on students who appear to be doing well "against the odds." Anderson, Hollinger, and Conaty (1992) decided to take a closer look at a specific group of students—high achievers from poor families who are in poor schools.

For their analyses, Anderson, et al. selected only students in high-poverty schools—i.e., schools in which 51 to 100 percent of the students were eligible for free or reduced-price lunch. They further selected only students categorized in the lowest socioeconomic (SES) quartile. Students were then selected for one of two groups or dropped from the analyses: a low achieving group, consisting of students who scored in the lowest quartile on a composite of the reading and mathematics tests, and students who scored in the top two quartiles on the test composite.

Researchers compared these two groups of students on a large number of variables: family characteristics and supervision, school attendance patterns, homework, television viewing, and perceptions of school climate and disciplinary problems. There was a tendency for the high-achieving students to:

- Live with both parents
- Arrive at school on time
- Attend their classes regularly
- Have limits on the amount of time they can go out with friends on school nights

The high achievers also appeared to be more likely to report that their parents discuss course selections or school events with them. They were somewhat more likely to report "literacy-rich" homes—e.g., their families own an atlas, a dictionary, and more than 50 books—although a majority of the low achievers also reported that their families had these resources. There were also no significant differences between the percentage in each group reporting that their family had a specific place for study, a daily newspaper, a regularly received magazine, or an encyclopedia.

Differences on television watching and homework time were present but smaller than expected:

- High achievers were somewhat less likely to watch a great deal of television on weekdays, but the differences were not statistically significant. Television appeared to be an integral part of their lives for both groups, with only minor, nonsignificant differences in viewing habits on weekdays or weekends.

- High achievers were somewhat more likely to report doing a great deal of *English homework* (i.e., 3 or more hours a week), but 56% of them reported doing an hour or less each week, about the same percentage as for low achievers.

- The pattern for *math homework* was similar: More high achievers reported doing 3 hours or more of homework, but 54% of both groups reported that they do an hour or less of math homework each week.

High achievers were more likely to report reading for pleasure: 35%, compared to just 13% of the low achievers, spent three or more hours reading each week, not counting the time that they read for school work.

In closing, it seems appropriate to end with the following quote from researcher Ron Edmonds (1979), who said,

> *How many effective schools would you have to see to be persuaded of the educability of poor children? If your answer is more than one, then I submit that you have reasons of your own for preferring to believe that basic pupil performance derives from family background instead of school response to family background.*
>
> *Whether or not we will ever effectively teach the children of the poor is probably far more a matter of politics than of social science and that is as it should be. We can, whenever and wherever we choose, successfully teach all children whose schooling is of interest to us. We already know more than we need to do that. Whether or not we do it must finally depend on how we feel about the fact we haven't so far.*

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GAPS IN ACADEMIC ACHIEVEMENT: WCPSS STATUS 2000-2001

Authors

Chuck Dulaney
Nancy Baenen
Senior Directors, E&R

Karen Banks
Assistant Superintendent, E&R

Kimberly Yaman
Glenda Burch
Evaluation Assistants

Contributing Staff

David Scudder
Doris Tyler
Evaluation Specialists

Mark Lindblad
Kevin Gilleland
Data Analysts

Renata McAdams
Secretary

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Department of Evaluation and Research
WAKE COUNTY PUBLIC SCHOOLS
Raleigh, North Carolina
www.wcpss.net
(919) 850-1863